Knowledge, Skills & Abilities
Senior Programmer Analyst (Specialist)

Knowledge of:

1. The phases of the systems development life cycle in order to develop effective systems.

2. Methodologies of system analysis to ensure business requirements are met.

3. Design methodologies to design systems.

4. Programming methodologies to build systems.

5. Application development methodologies to ensure application development processes are performed according to departmental standards.

6. Data modeling methodologies to apply to the development of an application.

7. Information Technology techniques to sort, search, and queue data.

8. Project management principles, practices, and procedures to ensure effective delivery of Information Technology services.

9. Application program documentation techniques to ensure application development processes are recorded according to departmental standards.

10. Reusable applications logic to ensure efficiency and optimal performance in the system.

11. Techniques to integrate with other systems to ensure cohesiveness in the system.

12. Presentation techniques to effectively educate customers and/or other staff.

13. Application deployment methodologies in order to effectively deploy the developed application.

14. Quality assurance and quality control methodologies in order to comply with departmental standards.

15. Version control methods to track changes made to software to ensure the software complies with the latest specifications.

16. SQL in order to develop a computer program.

17. Object Oriented languages to design and develop system applications.

18. Data base management system software (e.g., Microsoft SQL Server, MySQL software; Oracle, DB2) to support and maintain data and/or to run queries.

19. Specification and diagramming techniques for new or revised applications to ensure business requirements are met.

20. Information Technology standards, procedures, and methodologies to ensure proper compliance within the department.

21. Application program test scenarios for the development of an efficient application.

22. Information Technology testing concepts and techniques in order to assess an application.

23. The principles and techniques of studying work flow to develop new and/or revised Information Technology system applications.

24. Basic principles of database design techniques to ensure the department's requirements are met.

25. Data integrity control methodology to design an application.

Skill to:

1. Coordinate project activities with other organizations and/or units to ensure project activities are integrated and supported properly.

2. Identify the phases of the entire system development life cycle in order to understand the phases involved in developing and implementing an effective application.

3. Conduct structured walk throughs and independent reviews in order to ensure effectiveness of the program structure and adherence to standards.

4. Perform detailed impact analysis of applications used to ensure that information provided meets the department's requirements and expectations.

5. Develop application program documentation to ensure all application development processes are appropriately recorded.

6. Define data requirements to support the system.

7. Design an application using required specifications within the defined architecture to meet user requirements.

8. Design application programs to meet user requirements.

9. Design programs to ensure optimal product availability and performance.

10. Define reusable applications logic to ensure consistency between programs.

11. Evaluate reusable applications logic to ensure efficiency and optimal performance in the system.

12. Determine application architecture in order to ensure business requirements are met.

13. Determine users' requirements including performance availability and scalability to design an application that meets the users' needs.

14. Prepare applications system design diagrams to facilitate understanding by customers and team members.

15. Identify failing or poorly performing application components to assess for problems within an application.

16. Analyze failing or poorly performing application components in order to assess the need for replacement.

17. Identify performance issues and opportunities to develop improvements in the system to ensure an effective system is in place.

18. Design a presentation in order to communicate system design development.

19. Manage version control to track changes made to software to ensure that the software complies with the latest specifications.

20. Develop solutions to problems in the application development to support and maintain enterprise-wide interoperability.

21. Assess program operational and maintenance procedures to ensure efficient program functioning.

22. Review output files and error logs to monitor the performance of an application.

23. Modify application programs to meet user requirements.

24. Determine the impact of a proposed change to an existing system to meet user requirements.

25. Write code using Object Oriented languages to design and develop system applications.

26. Write code using SQL in order to develop a computer program.

27. Utilize data base management system software (e.g., Microsoft SQL Server, MySQL software; Oracle, DB2) to support and maintain data and/or to run queries.

28. Prepare detailed specifications and flowcharts for revised or new systems to ensure documentation is complete.

29. Interpret data models in order to apply to the development of an application.

30. Apply quality assurance techniques in the development of an application to ensure standards are met.

31. Plan for data integrity control methods in the application design process to ensure standards are met.

32. Review standards, procedures, and methodologies of the Information Technology department to ensure proper compliance within the department.

33. Test software to ensure the software works properly.

34. Design usability testing scenarios in order to ensure efficient usability.

35. Develop test data for comprehensive application testing.

36. Build application program test scenarios for the ultimate development of an efficient application.

37. Evaluate application program test scenarios to assess the efficiency of the program.

38. Provide technical assistance to users to resolve technical software, operating, application, or network problems.

39. Write various documents (e.g., technical reports, Budget Change Proposals, Feasibility Study Reports) at the appropriate level to ensure information is relayed accurately and understandably.

40. Design systems and applications of the highest complexity to meet customer's needs.

41. Provide expert level assessment of cost, impact analysis, and resource availability in response to change control request to ensure applicability of meeting user's request.

42. Mentor staff on a variety of work tasks to improve their skills and knowledge.

43. Provide expert level assistance to business liaisons using technical expertise to solve complex business problems.

44. Monitor staff work assignments and report progress to management as directed to ensure work is completed timely and accurately.

45. Coordinate implementation plans between business users and technical staff to ensure business needs are met.

46. Develop implementation plans between business users and technical staff to ensure business needs are met.

47. Execute implementation plans between business users and technical staff to ensure business needs are met.

48. Coordinate the transition of an application from development mode to maintenance mode to ensure business continuity.

49. Oversee projects to ensure all project milestones and timelines are met.

50. Act as a facilitator for Joint Application Development (JADs) in cooperation with the customer and technical experts to gather requirements to resolve the customer's issues.

51. Design databases using required specifications within the defined architecture to meet user requirements.

52. Perform necessary tasks to recover production data loss due to application and/or system failure.

53. Review and approve document deliverables to account for the completion of user requirements.

54. Assess appropriate technology in order to apply the most optimal solution to business problems.

55. Coordinate planning efforts to ensure optimal installation performance.

56. Identify data flow problems and troubleshoot as necessary to ensure optimal performance.

57. Create electronic interfaces using the appropriate technology to develop business transactions.

58. Gather data to analyze system utilization, capacity, and performance for the development of an application.

59. Perform a cost/benefit analysis of recommended solutions to application development problems to optimize business solutions.

60. Develop test plans to ensure requirements are met.

61. Develop test cases to ensure requirements are met.

62. Monitor systems and procedures to protect the data systems and databases from unauthorized users.

63. Develop effective security practices to ensure system is safe from unauthorized users.

64. Resolve security violations within the development of the application to ensure the new application is safe from unauthorized users.

Ability to:

1. Maintain cooperative working relationships with various individuals to ensure a cohesive working environment.

2. Work as a team to ensure a cohesive working environment.

3. Work independently to ensure work activities are completed in a timely and efficient manner.

4. Influence and persuade others to take a specific course of action.

5. Keep current with continually evolving and changing technologies.

6. Apply creative solutions to business problems to ensure business needs are most effectively met.

7. Communicate with various individuals (e.g., coworkers, management, customers) in a tactful and professional manner to ensure information is relayed accurately.

8. Manage multiple priorities to produce quality products for customers by utilizing effective resource management skills.

9. Negotiate with various individuals to resolve issues in a tactful manner.

10. Delegate work assignments to team members to ensure project work is completed in a timely and effective manner.